

IN THE SPECIFICATION

On page 1, after the title, please amend the following section:

Cross-Reference to Related Application

This patent application is a continuation of U.S. Patent Application Serial No.: 09/518,917, filed on March 6, 2000, which claims priority to [[This patent application is a continuation of]] U.S. provisional patent application 60/123,150 filed March 5, 1999. [[This application is]] Both applications are incorporated herein by reference.

The paragraph beginning at page 2, line 4, is amended as follows:

To address this and other needs, the inventor devised active headsets with automatic turn-on and/or turn-off circuits and related mode-control methods for active headsets. One exemplary embodiment senses a condition of the headsets, for example, the light, pressure, or temperature within one earcup, and then turns the headset on or off in response to the sensed condition. Other embodiments that include automatic noise- reduction (ANR) circuitry use an ANR driver to sense engagement of an earcup with a user's head and an ANR microphone to sense disengagement of the earcup from the user's head.

The paragraph beginning at page 3, line 21, is amended as follows:

However, if the signal indicates that the earcup has been engaged with the head of the user, mode-control circuit 120 enables or activates ANR circuitry 140 to control or otherwise

affect the perceived acoustic energy within earcup 110. This generally entails ANR sensor 140 outputting an electrical signal representative of acoustic energy within earcup 110 to the ANR circuitry. In turn, the ANR circuitry processes the electrical signal and outputs a responsive electrical signal to ANR driver 140. ANR driver 140 ultimately produces an acoustic signal intended to cancel, suppress, or otherwise alter the acoustic energy within earcup 110.

The paragraph beginning at page 5, line 8, is amended as follows:

Figure 2 shows a second exemplary embodiment of an ANR headset 200 including an automatic mode control feature in accord with the invention. (Figure 2 omits earcups for clarity.) Headset 200 includes an ANR microphone 140, ANR circuitry 150, an ANR driver 160, and implements automatic mode control using a turn-off circuit 130a, a turn-off circuit 130b, and a power switch 130c. Turn-off circuit 130a is responsive to signals from ANR microphone 140 to control power switch 130c, and turn-on circuit 130b is responsive to signals from ANR driver 160 to control the power switch. Thus, unlike headset 100 in the first exemplary embodiment, headset 200 omits a dedicated mode sensor, and instead uses ANR driver 160 and microphone 140 as respective headset engagement and headset disengagement sensors.

The paragraph beginning at page 5, line 20, is amended as follows:

On the other hand, after engagement, the earcup and surface 111 define a substantially closed volume that changes with user movements, such as head and jaw movements and the pulsating flow of blood through the confronting surface. In turn, these volume changes cause momentary pressure changes within the earcup, which are generally inaudible low-frequency

events correlated only to engagement of the earcup with surface 111. In response to these events, microphone [[130]] 140 produces a low-frequency electrical signal which turn-off circuitry 130b monitors. If the turn-off circuitry detects that this signal is absent for a sufficient period of time, such as 2 or 3 or 5 or more minutes, it deactivates power switch 130c.

The paragraph beginning at page 6, line 17, is amended as follows:

Detector [[340]] 330, which detects signals swings greater than 50 millivolts, includes an LT1495 operational amplifier U1b, a 1N914 diode D1, and a one-mega-ohm resistor R8k. Amplifier U1b has a positive input coupled to the output of amplifier U1a, and a negative input coupled to the positive terminal of diode D1. The negative terminal of diode D1 is coupled to ground, and resistor R8k is coupled between the positive terminal of diode D1 and positive supply terminal V+. Inverter [[166]] 340 has its input coupled to the output of amplifier U1b, and its output coupled to an input of processor 350[.,,].

The paragraph beginning at page 7, line 25, is amended as follows:

Band-pass filter 420, which defines a one-to-five hertz passband with an approximate gain of 30 decibels, comprises a resistor R1k of 330 kilo-ohms, a resistor R2k of 330 kilo-ohms, a resistor R3k of 33 kilo-ohms, a resistor R4k of 1 kilo-ohm, a resistor R5k of 620 kilo-ohms, and a resistor R1m of 470 kilo-ohms. Filter [[18]] 420 also comprises three 100-nanofarad capacitors C1k, C2k, and C3k, and one 470-nanofarad capacitor C1m. Filter [[180]] 420 also comprises an operational amplifier U5b which provides a pressure signal indicative of the pressure in earcup 120 via capacitor C1m to threshold detector 430.

The paragraph beginning at page 8, line 8, is amended as follows:

Threshold detector 430, which comprises an LMV324 operational amplifier, a 470-kilo-ohm resistor R2m, a 1-kiloohm resistor R3m, and a 10-kilo-ohm resistor R4m, compares the pressure signal to a 225-millivolt reference voltage at a node C and outputs a signal indicating the result of the comparison to processor 440. When the pressure signal at node B is greater than the reference voltage at node C, detector 430 outputs a low signal, which indicates an "on-head" event, that is, engagement of earcup 110 with surface $[[110]]$ 111, to processor 440.